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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,198	02/12/2004	Seung Gyu Lee	K-0609	2762
34610	7590	09/13/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			SEVER, ANDREW T	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/776,198	LEE, SEUNG GYU	
	<b>Examiner</b>	<b>Art Unit</b>	
	Andrew T. Sever	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/2004, 5/2005</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rotating channel-changing prism of claim 5 and similar claims must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

It appears that "rotatably" is perhaps the incorrect word, as currently written the claim appears to be literally claiming a prism that is physically rotated in space, if this is the case a drawing showing how the prism is rotated must be shown. If however applicant is claiming that

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the prism changes the direction of the incident light, then applicant should appropriately amend the specification and claims to represent this fact clearly. For purposes of a prior art examination it will be assumed that applicant is referring to changing the direction of light, since it is not clear from the specification what rotating the prism would accomplish or if such a device would be functional. Applicant is directed to US 6,765,544 to Wynne Willson, which teaches in, figure 2 more than one rotating prisms 110 and 120 which can be used in a final rejection if the claims are actually directed to a prism that physically rotates.

2. The drawings are objected to because Applicant refers to figure 5 for example in paragraph 40 on page 9 instead of the actual figure numbers of either 5A or 5B. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

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informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Applicant's specification is filled with grammatical and spelling errors and should be corrected. For example in paragraph 3 applicant states, "a projector is popularized" which should correctly "projectors have become popular." There are numerous other examples.

### ***Claim Objections***

4. Claims 6, 12 and 13 are objected to because of the following informalities: it claims that a prism is an abstract idea. Appropriate correction is required.

Applicant claims that the prism is a distance, a prism is a solid object not a measurement. For purposes of a prior art rejection the claim will be interpreted to be claiming that the prism receive incident light and emits light at a different location some distance apart.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3-8 and 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by

Sawamura et al. (US 2002/0122156.)

Sawamura teaches in figure 1 a projecting optical system, comprising:

A lamp (1) for irradiating light;

A color divider (2) for dividing colors of light irradiated from the lamp;

A illumination mixer (3) for irradiating the light with equal light intensity;

A channel-changing prism (9) for changing a channel of light irradiated from the illumination mixer to upward and downward; and

A TIR prism (6) for changing a direction and angle of light to a predetermined direction and angle.

*With regards to applicant's claim 3:*

Lenses 4c and 4b have the channel-changing prism (9) situated between them.

*With regards to applicant's claim 4:*

Part 2 is a color wheel, which is a disk with color filters on it that rotates.

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*With regards to applicant's claims 5 and 7:*

The light entering the prism is emitted in a almost perpendicular direction.

*With regards to applicant's claim 6:*

The prism has a length and therefore occupies a distance.

*With regards to applicant's claims 8, 10, 11, 12, 13, and 14:*

See above with regards to claims 1, 3, 4, 6, 6, and 7 respectively.

*With regards to applicant's claim 15:*

See paragraph 25.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawamura et al. (US 2002/0122156) as applied to claims 1 and 8 above, and further in view of Mihalakis (US 6,375,330.)

As described in more detail above Sawamura teaches a projection optical system that among other thing includes a lamp and a color divider, however Sawamura does not

teach the use of a reflective mirror for changing the channel of light irradiated from the lamp as it enters in to the color divider. Mihalakis teaches in figure 1 a mirror 55 for redirecting light from the light source to the light engine (62). Mihalakis teaches in column 32 lines 23-35 that the use of mirror (22 which is not labeled but from the description would correspond to the mirror on which point 55 is at) that the optical engine (all those parts after the lamp which in the case of Sawamura would include the color divider) can be oriented with respect to the light source in such a manner as to fit better in the optical case or make it more compact. Since this is desirable it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the reflective mirror of Mihalakis in the projection optical system of Sawamura in order to make it easier to assemble with regards to the case.

### ***Double Patenting***

9. Claim 13 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 12. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).



***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 6,008,951 to Anderson teaches in figure 6 a projection optical system which includes direction changing elements.

US 2002/0180939 to Miyata et al. teaches in figures 4(a) and 4(b) direction changing elements prior to a TIR prism.

US 2001/0021004 to Yano teaches in figures 5-11 a projector with a variety of channel-changing prisms.

US 6,540,359 to Cornelissen et al. teaches in figure 1 a channel changing prism (9) and a prism for channeling light to reflective light valves.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS

A handwritten signature in black ink, appearing to read 'W B Perkey', written in a cursive style.

**William Perkey**  
**Primary Examiner**